

REMARKS

Claims 1-22 were previously pending in this patent application. Claims 16-22 were withdrawn in response to a restriction and election requirement. Claims 1-15 stand rejected. Herein, Claims 1 and 9 have been amended. Accordingly, after this Amendment and Response, Claims 1-15 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks, and arguments set forth below is respectfully requested.

35 U.S.C. Section 102(b) Rejections

Claims 1, 2, and 9 stand rejected under 35 U.S.C. 102(b) as being anticipated by Fujiki et al., U.S. Patent No. 5,736,791 (hereafter Fujiki). These rejections are respectfully traversed. The Office Action incorrectly identifies Fujiki as Patent No. 6,607,937 instead of Patent No. 5,736,791 on pages 3, 4, and 6.

Independent Claim 1 recites (as amended):

A semiconductor device comprising:

a pad metal layer having a perimeter area and a center area;
a lower metal layer having a plurality of apertures below said center area of said pad metal layer, wherein said ***apertures are arranged into a plurality of rows each row comprising more than one of said apertures and a plurality of columns each column comprising more than one of said apertures***; and
an interlayer dielectric formed between said pad metal layer and said lower metal layer. (emphasis added)

It is respectfully asserted that Fujiki does not disclose the present invention as recited in Independent Claim 1. In particular, Independent Claim 1 recites the limitation, "***a lower metal layer having a plurality of aperture...wherein said apertures are arranged into a plurality of rows each row comprising more than one of said apertures and a plurality of columns each column comprising more than one of said apertures***," (emphasis added). In contrast, Fujiki discloses apertures arranged as a single row instead of a plurality of rows and as a plurality of columns each column having a single aperture instead of having more than one aperture, as in the invention of Independent Claim 1. [Fujiki; Figures 1, 2, and 3]. Therefore, it is respectfully submitted that Independent Claim 1 is not anticipated by Fujiki and is in condition for allowance.

Dependent Claim 2 is dependent on allowable Independent Claim 1, which is allowable over Fujiki. Hence, it is respectfully submitted that Dependent Claim 2 is patentable over Fujiki for the reasons discussed above.

With respect to Independent Claim 9, it is respectfully submitted that Independent Claim 9 recites similar limitations as in Independent Claim 1. In particular, Independent Claim 9 recites the limitation, "***a lower metal layer having a plurality of aperture...wherein said apertures are arranged into a***

plurality of rows each row comprising more than one of said apertures and a plurality of columns each column comprising more than one of said apertures, " (emphasis added). As discussed above, Fujiki fails to disclose the cited limitation. Therefore, Independent Claim 9 is not anticipated by Fujiki and is allowable for reasons discussed in connection with Independent Claim 1.

Claims 6, 7, 13, and 14 stand rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative under 35 U.S.C. 103(a) as obvious over Fujiki et al., U.S. Patent No. 5,736,791 (hereafter Fujiki). These rejections are respectfully traversed. The Office Action incorrectly identifies Fujiki as Patent No. 6,607,937 instead of Patent No. 5,736,791 on pages 3, 4, and 6.

Dependent Claims 6-7 and Dependent Claims 13-14 are dependent on allowable Independent Claims 1 and 9 respectively, which are allowable over Fujiki. Hence, it is respectfully submitted that Dependent Claims 6-7 and 13-14 are patentable over Fujiki for the reasons discussed above.

Claims 3-5, 8, 10-12, and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Fujiki et al., U.S. Patent No. 5,736,791 (hereafter Fujiki), in view of Heim, U.S. Patent No. 5,248,903 (hereafter Heim). These rejections

are respectfully traversed. The Office Action incorrectly identifies Fujiki as Patent No. 6,607,937 instead of Patent No. 5,736,791 on pages 3, 4, and 6.

Dependent Claims 3-5 and 8 and Dependent Claims 10-12 and 15 are dependent on allowable Independent Claims 1 and 9 respectively, which are allowable over Fujiki. Moreover, Heim does not disclose a lower metal layer having a plurality of aperture, wherein the apertures are arranged into a plurality of rows each row comprising more than one of the apertures and a plurality of columns each column comprising more than one of the apertures, as in the invention of Independent Claims 1 and 9. Hence, it is respectfully submitted that Independent Claims 1 and 9 are patentable over the combination of Fujiki and Heim for the reasons discussed above. Since Dependent Claims 3-5 and 8 and Dependent Claims 10-12 and 15 depend from Independent Claims 1 and 9 respectively, it is respectfully submitted that Dependent Claims 3-5, 8, 10-12, and 15 are patentable over the combination of Fujiki and Heim for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, arguments, and remarks overcome all rejections. All remaining claims (Claims 1-15) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-15) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

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Respectfully submitted,

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